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Form ECR-616 (Part II)

U.S. Department of Agriculture

Issued November 15, 1941

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL ADJUSTMENT ADMINISTRATION
EAST CENTRAL DIVISION

1942 Agricultural Conservation and Related Programs - East Central Region

PART II PROCEDURE FOR DETERMINATION OF ACREAGE PLANTED TO WHEAT -
1942 PROGRAM

These instructions outline the procedure for determining the acreage planted to wheat, including volunteer wheat, on farms for which the 1942 wheat allotment is 10 acres or more and on non-wheat-allotment farms covered by wheat insurance. The acreage of wheat on other farms will be determined during the regular check of performance on such farms.

A. GENERAL INSTRUCTIONS FOR COUNTY OFFICES

Form ECR-618 will be used to record the acreage seeded to wheat under the 1942 program. This acreage will be used in connection with the 1942 Agricultural Conservation Program, wheat marketing quotas, if quotas are in effect, wheat loans, wheat insurance and eligibility for parity payments, if parity payments are made. The photographs used in checking performance in 1942 will be those which were used in 1941 except in counties where new photography is available or in exceptional instances where the 1941 photograph has been lost or damaged to such an extent that its replacement has been necessary. In addition to the enlargement, use will be made of the farm map, cut-out or other acreage list for the farm.

B. SELECTION AND TRAINING OF SUPERVISORS

The county committee will select and approve supervisors for training. Those approved for training will be instructed and examined by a State supervisor or field officer in schools scheduled by the State office. One day's instruction and at least two days' field training will be given to all prospective supervisors who did not check performance in 1941. Competent supervisors who checked performance in 1941 and who received satisfactory ratings on this work will be given instruction on the procedure outlined in this Form ECR-616 (Part II) but will not be given field training unless such training is deemed by the State office representative to be necessary. All field training should be given to small groups.

After the training all prospective supervisors will be given an examination. Those who make a passing grade and who are deemed by the State supervisor to be competent and conscientious in the field work will be eligible for employment if approved by the State office. As soon as the examination grades have been determined the county office should prepare in triplicate, Form ECR-427, listing those recommended for employment. The three copies should be forwarded to the State office. The State office will return one copy with indication in column (L) of those approved. The county committee will employ, from the list of those approved by the State office, a number of supervisors sufficient to complete the checking in ample time to issue wheat marketing cards. Supervisors shall not be employed or work started until the approved list has been received. The State office will not approve payment to any but approved supervisors.

C. SPOT CHECKING

State supervisors working under the direction of the State office will spot check at least 3 farms or 5 percent of the farms checked by each supervisor, whichever is the larger number, and the related work of county office employees. The county committee shall immediately discontinue the services of any supervisor whose work has been rated "U" (unsatisfactory) by a State supervisor. The pay for such supervisor's services performed to that date may be adjusted by the county committee at its discretion. All work done by him which may have been unsatisfactory shall be rechecked by an approved competent supervisor.

D. PRELIMINARY OFFICE WORK

1. There should be assembled for each farm which is to be checked:
 - (a) Form ECR-618
 - (b) A copy of the farm map or cut-out for the farm (if available)
 - (c) The 1941 executed Form ECR-518, or other acreage list, if a farm map or cut-out is not available.

The above forms for each farm should be placed in an individual 9-1/2 x 12-inch envelope so as to guard against loss or confusion with forms for other farms. The operator's name, farm serial number, aerial photograph number, and any other information which will help identify the farm should be shown on the outside of the envelope. All envelopes bearing the same photograph number should be grouped together.

2. The following entries should be made on Form ECR-618 at the county office prior to delivery to the supervisor:
 - (a) The name and address of the 1942 operator, the photograph number, and the State and county code and 1942 serial number, in the spaces provided at the top of the form.
 - (b) The 1942 wheat allotment, on line 2, column E of Section III.

E. SUPERVISORS' WORK ON FARMS

In counties where aerial photographs are used, the procedure outlined in Form ECR-516, Part I, relating to the use of the photographs, will be followed.

1. The supervisor should enter the name of the 1942 operator in line 12 of Section V and the name of each other producer who had an interest in the wheat in successive lines of this Section.
2. The supervisor will visit every field seeded to wheat or to small grain mixtures containing wheat and obtain the information necessary to make the following entries in Section I, "Farm Field Report," and Section V, "Names of Producers," of Form ECR-618.

On farms on which wheat was pre-measured and on which wheat was seeded within the pre-measured area and deduction areas allowed in pre-measurement are not seeded to wheat, the supervisor will enter the field designation in Column A, the crop classification in Column D, and the acreage of wheat in Column H. In making the entries in Columns A and D the instructions in paragraphs a. and d. below will be followed.

On other farms (including pre-measured farms on which wheat has been seeded in excess of the pre-measured area or on which deductions allowed at the time of pre-measurement were seeded to wheat) the entries specified below will be made.

- a. Column A. The field number of each field or subdivision seeded in the fall of 1941 to wheat or to a wheat mixture should be entered in Column A. Where photographs are used, this number should be obtained from the farm map, cut-out or photograph and fields planted to wheat will retain the field numbers which were used for them in 1941. Subdivisions should be shown by letter, for example, 1-A, 1-B, etc. A field which formerly was divided into subdivisions but has been seeded in its entirety to wheat for 1942, should be given the field number without the subdivision

letters being shown. If two or more fields as shown on the 1941 enlargement, cut-out, or farm map are combined in 1942, the new field will be assigned a new field number and the old numbers should be stricken out on the acreage list of the farm map or cut-out.

- b. Column B. Column B will be used for careful estimates, as agreed upon by the supervisor and the operator or his representative, of areas devoted to wheat or wheat mixtures for which the supervisor does not have a record of the acreage. An entry will not be made in Column B if the acreage is available, unless the operator or his representative, or the supervisor thinks that such acreage is incorrect and wants it remeasured, in which event his estimate will be entered in Column B as an indication to the County Office that the area is to be planimetered or rotometered. If this entry is made because the supervisor, but not the operator or his representative, thinks the established acreage is incorrect, he will circle the estimate.
- c. Column C. If a record of the acreage is available, the supervisor will enter the acreage in Column C. An entry will not be made in Column C for a subdivision unless it is definitely known that it is identical to the subdivision for which the acreage is available.
- d. Column D. The words "wheat" or "wheat mixture" should be entered in Column D. In determining whether a small grain is wheat or a wheat mixture, consideration should be given to the definition of "acreage planted to wheat" in the 1942 Bulletin. In brief, any mixture classified as not being wheat, shall have been seeded with a mixture containing either less than 50 percent by weight of wheat or 25% or more by weight of rye, barley, vetch, or Austrian winter peas, but if the crop other than wheat fails to reach maturity and the wheat reaches maturity the acreage involved will be classified as planted to wheat. Determination as to whether a small grain crop is wheat or a wheat mixture will be made at the time the wheat is checked but mixtures will be rechecked on any farm if the county committee has reason to believe that the grain should be classified as wheat.

In the case of wheat mixtures there should be entered in Column D the pounds of wheat per acre, the kinds of other seed, and the pounds of each other kind of seed per acre.

- e. Column E. The supervisor will make no entry in this column.
- f. Columns F and G. The dimensions of permissible deductions from areas seeded to wheat should be determined accurately and entered in Column F. A deduction will be permitted for an area not occupied by wheat in wheat fields or subdivisions provided the area of the deduction is 0.03 acre or more, with the exception that areas occupied only by corn shocks will not be deducted. Corn shock rows may be deducted in those States where such deductions were made from the wheat acreage used in determining wheat allotments (West Virginia, Maryland, and Delaware). In all cases the measurements or areas must be the full amounts required to permit deduction. If the area to be deducted is not of uniform width, a sketch with measurements should be shown either in Column F, on the back of the report or on cross section paper. Care should be taken that sufficient measurements are made and shown to permit the area of each deduction to be calculated in the office.

No entries will be made in Column F, in the case of mixtures but the carefully estimated area of deductions from mixtures will be entered in Column G.

The areas of deductions from wheat will be entered in Column G by the supervisor only if the 1941 executed Form ECR-518 is available and shows such deductions, identical with the 1942 deduction areas.

- g. Column H. The supervisor will make no entry in this column.
- h. Columns I and J. The names and addresses of the producers who share in each field or subdivision of wheat will be entered in the spaces provided in Section V. A number will be entered before each name. This number will serve as a code to indicate reference to such producer in Column I of Section I and other places on the Form ECR-618. The code numbers indicating each producer interested in the 1942 wheat should be entered in Column I and the share of each in the wheat should be indicated by a fraction in Column J.

The names and addresses of producers who share in wheat mixtures but have no interest in the wheat should not be entered in Section V, and the fractional share of any producer in mixtures should not be entered in Column J, but if a recheck causes a mixture to be reclassified as wheat the recheck supervisor will enter the interested producer's name and share.

- i. Column K. The supervisor will make no entry in this column.
- j. The supervisor should read the "Operator's certificate" (Section X) to the operator or his representative, explain what it means, and obtain his signature. The name of the supervisor and the date of inspection should be entered and the supervisor should sign the certificate.

3. The supervisor should deliver the first 4 or 5 reports to the county office as soon as completed and thereafter as instructed by the county office, but at least once each week. All reports should be in the county office before May 1.

At the end of each day worked the supervisor will send to the county office a daily report on Form ECR-528 or ECR-628. These cards must be sent in promptly.

F. COMPLETION OF REPORT IN COUNTY OFFICE

Reports returned to the county office shall be checked immediately upon receipt to see that all necessary information has been obtained and entered. The field numbers of fields and subdivisions devoted to wheat or mixtures should be compared with the farm maps or cut-out and the enlargement to determine whether the fields have been properly identified.

The following fields and subdivisions should be planimetered or rotometered:

1. Subdivisions and fields devoted to wheat, for which the acreage is not available.

(Areas devoted to wheat mixtures need not be planimetered or rotometered. For them the estimated figure will be sufficient and a dash will be entered in column C; however, fields may be planimetered or rotometered if the acreage is needed in connection with the preparation or revision of a map, cut-out or other acreage list for the farm.)

2. Fields devoted to wheat and/or wheat mixtures, shown on the enlargement or cut-out as having boundaries changed since performance was checked in 1941. (In the event the enlargement or cut-out shows an altered boundary but the supervisor has entered the acreage in Column C, the case should be suspended pending clarification by the supervisor.)

3. Those for which the supervisor has shown, by an entry in both columns B and C, that, although the field or subdivision is the same as in 1941 and he has a record of the acreage, he or the operator or the operator's representative does not think that such acreage is correct, and wants it remeasured. If the newly determined figure is different from the established acreage it will be used for 1942 only if the operator has not been furnished the established acreage or is dissatisfied with such acreage and desires remeasurement.

(Any corrections of field acreages and/or boundaries should be made on all existing farm maps and tracings before the next planting season.)

Planimetered or rotometered acreages will be entered in Column C as the "determined" acreage of the field or subdivision. Acreages which have been entered by the supervisor in Column C will be checked against the farm map or other record of acreage and corrected if necessary. Such corrections should be made by striking through the supervisor's entry and entering the correct figure above. In the event of any question concerning the correct acreage the supervisor should be consulted.

Deductions from wheat fields will be computed, and the total acreage of deductions for a field or subdivision entered in Column G. This acreage will be subtracted from that entered in Column C and the result will be entered in Column H as the acreage of wheat. Fractions of an acre should be shown to the nearest tenth acre.

The entries in Column D with respect to wheat mixtures should be checked to determine whether the supervisor has shown the pounds of wheat, the kinds of other seed and the pounds of each kind seeded. In any case where there is reason to believe that the grain should not be classified as a mixture, the mixture should be rechecked in the spring for the purpose of proper classification.

G. NOTICES REGARDING ACREAGES

After the reports have been completed and checked, notices regarding the seeded acreage should be prepared and forwarded to the farm operators. The forms of the notices are given below. Attention is called to the fact that the acreage seeded to wheat is the acreage of planted wheat on allotment farms and that on such farms disposition of wheat will not reduce the planted acreage unless the farm is reclassified as a non-allotment-farm.

Operators of farms for which the acreage seeded to wheat is not in excess of the allotment should be sent the following Wheat Notice A:

1942 Wheat Notice A

NOTICE OF ACREAGE SEEDED TO WHEAT WITHIN ALLOTMENT
1942 Agricultural Conservation and Related Programs.

(Name of Operator)

(Farm Serial Number)

(Address)

(Date)

The measured acreage of wheat on your farm has been found to be _____ acres, which is within the wheat allotment for the farm.

If you have reason to believe this acreage is not correct you should notify us. If you wish to have the wheat acreage checked again, you may request a recheck by depositing, within fifteen days from the date of this notice, \$ _____ with the Treasurer of the County Association, to defray the cost of the service.

County Committeeman

Operators of farms having allotments of 15.1 acres or more on which the seeded acreage exceeds the allotment should be sent the following Wheat Notice B.

1942 Wheat Notice B

NOTICE OF ACREAGE SEEDED TO WHEAT

1942 Agricultural Conservation and Related Programs

(Name of Operator)

(Farm Serial Number)

(Address)

(Date)

The report of the acreage seeded to wheat on your farm shows _____ acres, whereas the 1942 wheat allotment for the farm is _____ acres. Therefore you have _____ acres of wheat in excess of the allotment. There are no provisions in the 1942 program for bringing the planted acreage within the allotment by disposing of excess wheat acreage.

If you have reason to believe that this acreage is not correct, you should notify us at once. If you wish to have the wheat acreage checked again you may request a recheck by depositing, within fifteen days from the date of this notice, \$ _____ with the Treasurer of the County Association, to defray the cost of the service.

County Committeeman

Operators of farms having allotments of 15.0 acres or less on which the acreage seeded to wheat exceeds the allotment by less than 10% should be sent the following Wheat Notice C.

1942 Wheat Notice C

NOTICE OF ACREAGE SEEDED TO WHEAT WHEN ALLOTMENT IS EXCEEDED BY LESS THAN 10%
1942 Agricultural Conservation and Related Programs

(Name of Operator)

(Farm Serial Number)

(Address)

(Date)

The report of the acreage seeded to wheat on your farm shows _____
acres, whereas, the 1942 wheat allotment established for the farm is _____
acres.

There are no provisions in the 1942 program for bringing the planted
acreage within the allotment by disposing of excess wheat acreage.

Any acreage above 15.0 acres will be subject to marketing quota re-
strictions, if marketing quotas for wheat are in effect in 1942.

If you have reason to believe that this acreage is not correct, you
should notify us at once. If you wish to have the wheat acreage checked
again you may request a recheck by depositing, within fifteen days from
the date of this notice, \$ _____ with the Treasurer of the County Associa-
tion, to defray the cost of the service.

County Committeeman

Operators of farms with allotments of 15.0 acres or less on which the acreage
seeded to wheat exceeds the allotment by 10% or more, but is not more than
15.0 acres should be sent the following Wheat Notice D.

1942 Wheat Notice D

NOTICE OF ACREAGE SEEDED TO WHEAT
1942 Agricultural Conservation and Related Programs

(Name of Operator)

(Farm Serial Number)

(Address)

(Date)

The report of the acreage seeded to wheat on your farm shows _____ acres, whereas the 1942 wheat allotment established for the farm is _____ acres. Since the seeded acreage exceeds the allotment by 10% or more, the farm is automatically classified as a non-wheat-allotment farm; thus no deductions or payment will be made with respect to wheat, and the production from the entire acreage may be marketed without penalty.

If you have reason to believe that this acreage is not correct, you should notify us at once. If you wish to have the wheat acreage checked again you may request a recheck by depositing, within fifteen days from the date of this notice, \$_____ with the Treasurer of the County Association, to defray the cost of the service.

County Committeeman

Operators of farms with allotments of 15.0 acres or less on which the acreage seeded to wheat exceeds the allotment by 10% or more and exceeds 15.0 acres, should be sent the following Wheat Notice E.

1942 Wheat Notice E

NOTICE OF ACREAGE SEEDED TO WHEAT
1942 Agricultural Conservation and Related Programs

(Name of Operator)

(Farm Serial Number)

(Address)

(Date)

The report of the acreage seeded to wheat on your farm shows _____ acres, whereas the 1942 wheat allotment established for the farm is _____ acres.

Since the seeded acreage exceeds the allotment by 10% or more, the farm is automatically classified as a non-wheat-allotment farm. Therefore no payment will be made with respect to wheat. The acreage in excess of 15.0 acres which is harvested after maturity for grain or hay or pasture for livestock or poultry, will be subject to marketing quota restrictions (if marketing quotas are in effect) and will cause any payment otherwise computed for the farm to be reduced.

If you have reason to believe that this acreage is not correct, you should notify us at once. If you wish to have the wheat acreage checked again, you may request a recheck by depositing, within fifteen days from the date of this notice, \$ _____ with the Treasurer of the County Association, to defray the cost of the service.

County Committeeman

H. RECHECKS

Rechecks at producers' request will be made by a competent supervisor, who will report the recheck with red pencil on the same copy of Form ECR-618 as was used for the original check. Any corrections in the planted acreage of wheat will be made in the county office, by striking through the original entry in Column G and entering the corrected acreage in red above the original.

I. REPORTS

Each county office should prepare on a form specified by the State office, a weekly report of the work completed through Saturday of that week. This report should be mailed to the State office Tuesday of the following week. The reports should begin with the week the first farms are checked in the county and should continue until all farm reports have been completed.

The first part of the report is devoted to a description of the general character of the country, and to a statement of the principal occupations of the people. It is then divided into two parts, the first of which is devoted to a description of the principal cities and towns, and the second to a description of the principal industries and manufactures.

The second part of the report is devoted to a description of the principal cities and towns, and to a statement of the principal occupations of the people.

The third part of the report is devoted to a description of the principal cities and towns, and to a statement of the principal occupations of the people.

The fourth part of the report is devoted to a description of the principal cities and towns, and to a statement of the principal occupations of the people.

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UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL ADJUSTMENT ADMINISTRATION

EAST CENTRAL DIVISION

1942 AGRICULTURAL CONSERVATION AND RELATED PROGRAMS

EAST CENTRAL REGION

PART III. INSTRUCTIONS FOR MEASURING SMALL IRREGULAR SHAPED FIELDS OR SUBDIVISIONS BY THE STAKE AND CROSS-SECTION PAPER METHOD

These instructions outline the method to be followed in measuring irregular shaped fields or subdivisions where aerial photographs are not available or in cases in which the field or subdivision cannot be plotted accurately on the photograph. This method utilizes stakes set at measured intervals through the field and a plot of the area on cross-section paper having lines spaced 10 divisions to the inch with each tenth line heavier than the others.

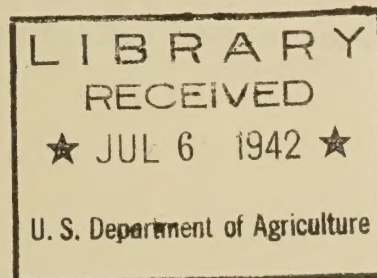
One or more connecting stake lines are temporarily established through the field or subdivision using stakes set in straight lines one chain apart or, if the field is very irregular, one-half chain apart. The line intersections are circled on the cross-section paper to represent stakes on the ground. Figures 1, 2, 3, 4, and 5 show how stake points (indicated by capital letters) are plotted on the cross-section paper.

Measurements are made from the breaks at the edge of the field or subdivision to points on the stake line, and such measurements are used to plot the field or subdivision to the scale of one inch to the chain. The acreage is determined by planimeter or rotometer.

In counties not using photographs this method will be used for small fields or subdivisions and to determine the areas of irregular sides of larger fields or subdivisions, after having "squared up" the field. Large fields or subdivisions cannot easily be plotted in their

entirety and those of regular shape need not be measured by this method, but any having one or more irregular sides should be measured either entirely by this method, if small, or by a combination of this and computations from chain measurements, if large. Plotting the fields or subdivisions to scale not only is more accurate than other simple methods of chain measurement but also makes it possible to identify them with the sketch and will greatly simplify the work of the spot check supervisor. Another advantage is that acreages can be determined much faster with planimeter or roto-meter than they can be computed from chain measurements.

The right-angle and compass-intersection methods of measuring and plotting to scale on cross-section paper are explained using figure 1 as an example for both methods. The compass-intersection method is more accurate than the right-angle method, since it eliminates any small errors that might be made in determining the right-angle points along the stake line. It has been found in actual practice that fields can be measured and plotted faster, and acreages determined accurately by using both methods in combination, viz, using the right-angle method for measuring and scaling in points close to the stake line and the compass-intersection method to locate points farther away.



A. RIGHT-ANGLE METHOD

FIGURE 1. Beginning at stake "A" it is determined that the corner of the field indicated by "a" is at right angle from the stake line at this point. The distance from "A" to "a" is measured on the ground and found to be 50 links. As each small ruled space on the cross-section paper represents 10 links on the ground, 5 spaces along the right angle line are counted off from "A" and point "a" dotted on the paper. The next break in the field boundary is indicated by "b". By walking along the stake line from "A" towards "B" the right angle point on the stake line opposite "b" can be determined. Measure from this right angle point to the nearest stake, which in this example is "B". This is found to be 30 links. Then measure from this same right angle point to "b" which is found to be 40 links. To correctly plot "b" on the cross-section paper count 3 small spaces back from "B" and 4 small spaces along the right angle line from the same right angle point and plot point "b". Continuing along the stake line from "B" towards "C" the right angle point on the stake line opposite "c" is 40 links beyond "B", and the distance from this point to "c" is 64 links. Point "c" is then plotted on the cross-section paper to scale in the same manner as "b". This method can be followed on around the field to "j", except that "f" is located by measuring from "D" along the stake line extended to the edge of the field. As each point is plotted on the cross-section paper it should be connected with a straight line to the preceding point.

It is not necessary to enter the measurements on the sketch, as acreages can be determined by planimeter or rotometer; however, if the county office so desires, the measurements may be entered as a check against the scaling.

B. COMPASS-INTERSECTION METHOD

FIGURE 1. After the stakes have been set in the field and plotted to scale on the cross-section paper as indicated by "A", "B", "C", and "D", the first point on the field or subdivision boundary, other than the points which fall directly on the stake line, must be located by measurements from two stakes. To locate the corner of the field indicated on the cross-

section paper by "a", measurement is made on the ground from "A" to "a" and this distance set off to scale on the compass. Using "A" as the compass pivot point an arc line is drawn with the compass long enough to be certain that "a" will fall at some point on this line. Another measurement is made on the ground from "B" to "a" and this distance also is set off to scale on the compass. Making "B" the pivot point, an arc line is drawn with the compass across the one previously made from "A". Where these lines intersect will be the correct location of "a". In most cases any point along the edge of the field can be correctly located on the cross-section paper by ground measurements made from the two nearest stakes, provided the point does not fall close to or directly on the stake line; however, in actual practice it has been found advantageous in some cases to locate the field breaks on the cross-section paper by using one measurement along the edge of the field and one from the nearest stake, viz, to locate "b" measure from "a" to "b" and from "B" to "b"; to locate "c" measure from "b" to "c" and from "B" to "c"; to locate "d" measure from "c" to "d" and from "C" to "d", setting each pair of measurements off on the compass to scale and locating by arc intersection as explained for "a". This method can be continued on around the field to "j", except the "f" is located by one measurement made from "D" along the stake line extended to the edge of the field.

C. USING TWO OR MORE CONNECTING STAKE LINES PLACED IN THE FIELD AT AN ANGLE OF 90°

In figure 1, all measurements and plotting have been made from a single stake line, but often fields are so shaped that more than one stake line is necessary in order to keep the measurements from the stake line to the breaks at the edge of the field or subdivision as short as possible. Examples of fields using two or more connecting stake lines are shown in figures 2, 3, and 4. Where two or more stake lines are used the stakes must be located on the cross-section paper to scale in the same position as they are set in the field. When practicable they should always be staked out in the field at right angles to each other as

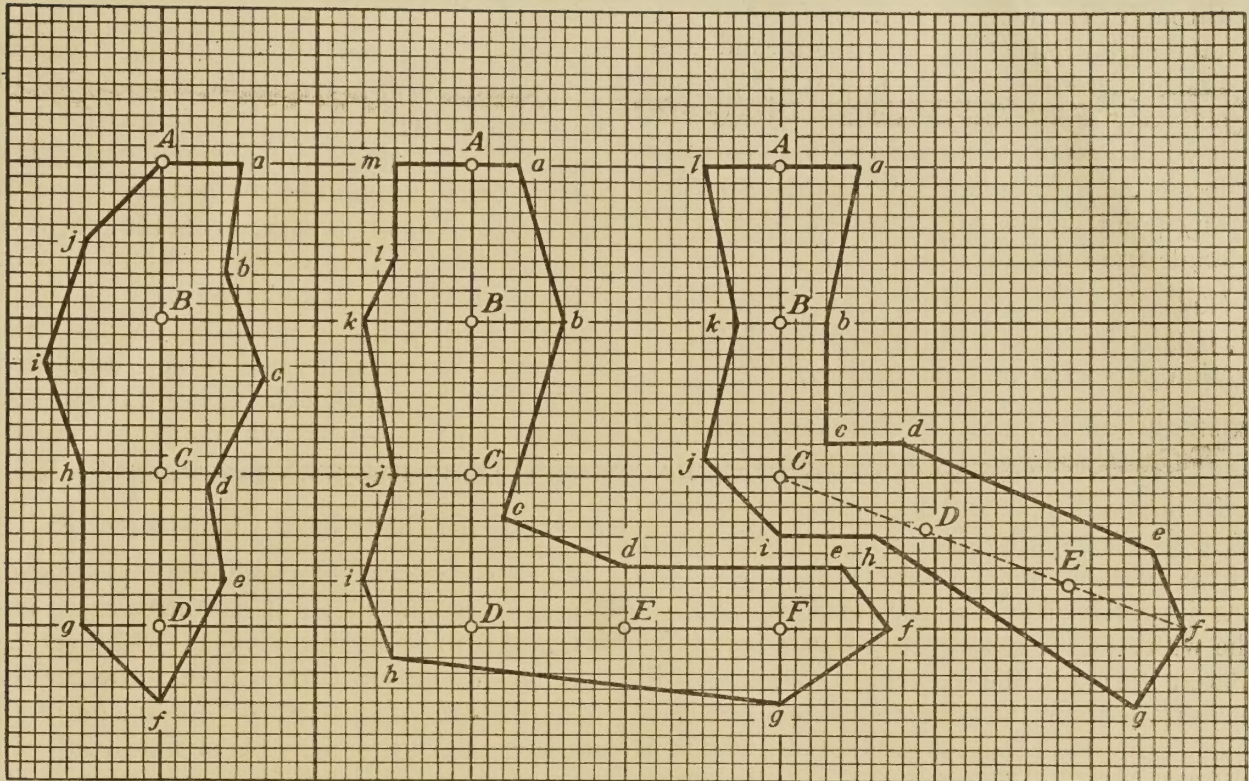


FIGURE 1.

FIGURE 2.

FIGURE 3.

shown in figure 2 and figure 4. The field breaks opposite each stake line can then be plotted by using the ruled lines on the cross-section paper.

The right angle between the stake lines should be established on the ground with a tape by either of the following methods:

(1) At a point in the base line 30 links from the corner stake the zero end of the tape should be made fast by inserting a chaining pin through the ring at the end of the tape. One man should hold the 90 link mark of the tape at the corner stake of the base line while the other man should hold the 50 link mark of the tape and walk in the direction of the new base line until the tape becomes tight and at that point drive a stake which will be on the new right angle base line.

(2) Points may be located by measurement of 50 links made forward and backward along the base line from the corner stake. From such points arcs of equal length may be swung in the direction of the new base line. The intersection of these arcs will locate a point on the new right angle base line.

D. USING TWO CONNECTING STAKE LINES PLACED IN THE FIELD AT AN ANGLE GREATER THAN 90°

In figure 3, two stake lines are used but the field is so shaped that they cannot be staked at right angle to each other. These two stake lines can be correctly plotted on the cross-section paper as follows:

(1) Stakes "A", "B", and "C" are entered on the cross-section paper as indicated. Field breaks "a", "b", "c", "j", "k", and "l" can be located from this line by the right angle method. As point "d" will be used as one of the key points from which to locate the unknown angle between the two stake lines on the cross-section paper, it should be located by the compass-intersection method using measurements from "B" and "C" to "d".

(2) Locate "D" on the cross-section paper by the compass-intersection method using measurements made from "d" to "D" and from "C" to "D". Extreme care should be used in this operation.

(3) Place a straightedge along stake points "C" and "D" and extend a line from "C"

through "D" long enough on the paper to take care of the field. As the second stake line indicated by "C", "D", and "E" runs obliquely across the ruled cross-section lines it will be necessary to use a scale to correctly locate the stakes along this line and to locate any point on the edge of the field, at right angle from the stake line.

Stake lines placed in the field at an angle less than 90 degrees can be located on the cross-section paper by the same method.

E. MEASURING FROM STAKE LINE PLACED ALONG THE EDGE OF A FIELD

In figures 1, 2, 3, and 4 all of the stake lines have been set approximately through the center of the field, but when a field or subdivision has one irregular side and one straight side and the width of the field is such that a stake line placed through the center would make all measurements to the edge of the field on either side of the stake line longer than one chain, it will be best to set the stakes close to the irregular side as indicated in figure 5. In this example only two points, "a" and "b", are more than one chain from the stake line.

F. MEASURING LARGE FIELDS

Large fields or subdivisions having irregular sides should be measured by a combination of the stake and cross-section paper method and computations from chain measurements. The regular portion should be chained and the area computed. The remainder, out to the irregular side should be staked and plotted. For example, if figure 5 were a large field, that portion described by "a", "b" and the stake line could be chain measured and computed while that part from the stake line to the irregular boundary would be plotted and planimeted or rotometered.

G. PLACING STAKE LINE OUTSIDE OF FIELD

When the area to be measured is planted to a crop through which it is difficult or impracticable to chain and set stakes which can be seen above the crop, the stake lines can be placed outside of the field or subdivision with measurements in to the crop or field line. In some cases it may even be necessary to stake out a rectangle outside a field, and make all measurements from the stakes in toward the crop boundary.

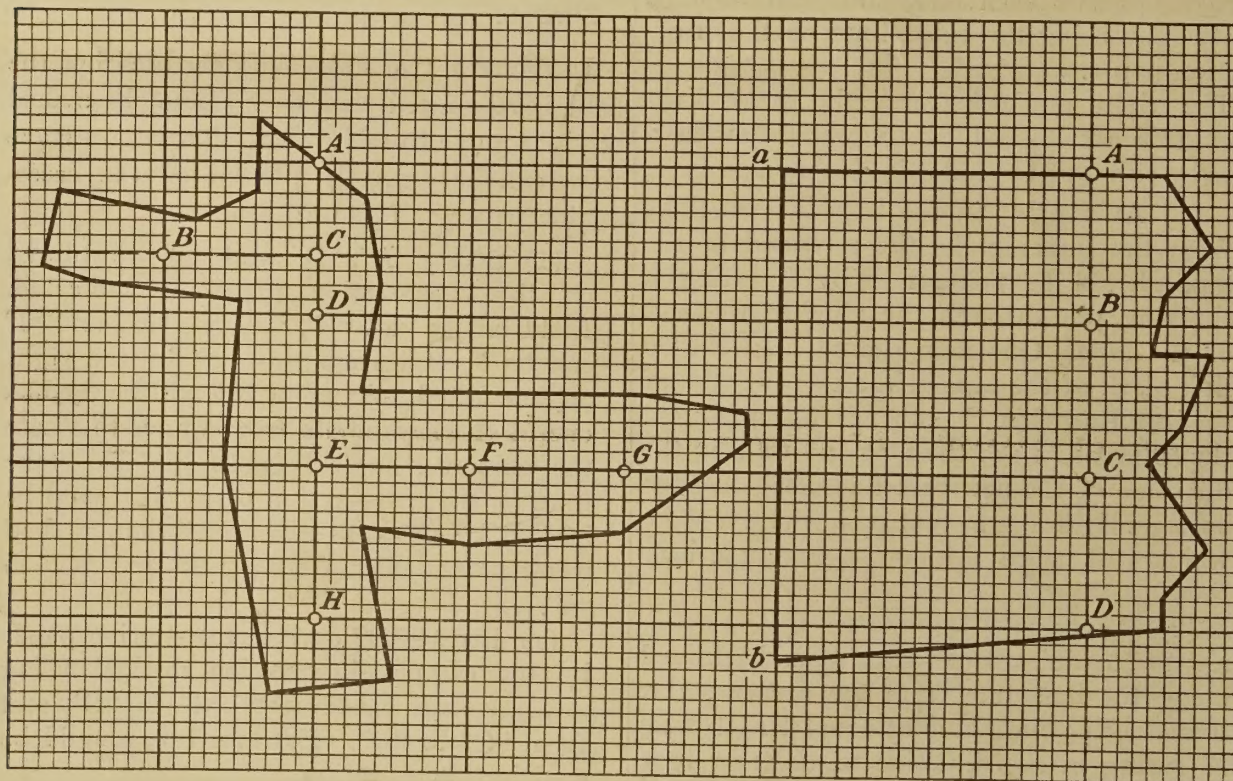


FIGURE 4.

FIGURE 5.